

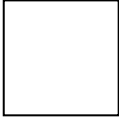



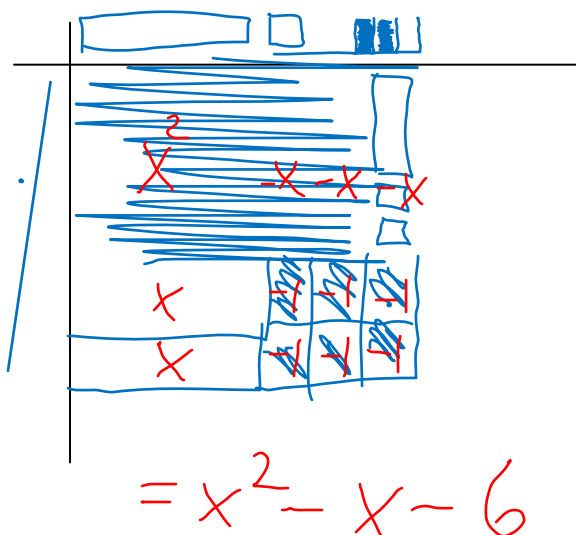
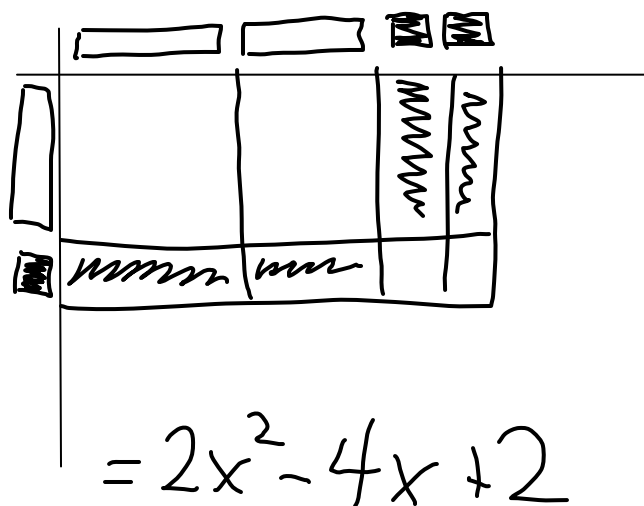


## Lesson 3.1: Expanding Algebraic Expressions

**Recall:** Multiplying two linear terms together forms an area.  
We can often represent this multiplication using algebra tiles.

	represents 1		represents $x$		represents $x^2$
	represents -1		represents $-x$		represents $-x^2$

1) Evaluate:  $(x - 3)(x + 2)$ 2) Evaluate  $(2x - 2)(x - 1)$ 

Definitions:

1. Monomial - an expression with a single term.  $3x$  or  $7$  or  $5xy$  or  $a^2bc^3$
2. Binomial - an expression with two terms.  $(2x+5)$  or  $(a + 2b)$  or  $(m^2 - pq)$

What is a term? A number or variable, or the product of numbers and variables

3. Trinomial - an expression with three terms.  $x^2 + 5x + 6$  or  $2xy + a + 5$
4. Polynomial - an expression with any number of terms.

Distributive Property: a special way in which multiplication is applied to addition of two or more numbers in which each term inside a set of parentheses can be multiplied by a factor outside the parentheses, such as

$$a(b + c) = ab + ac$$

Two methods, your choice:

Bunny Hops or

FOIL (First-Outer-Inner-Last)

$$2x(3x - 4)$$

$$= 6x^2 - 8x$$

Chart

$$2x(3x - 4)$$

Expanding

	3x	-4
2x	6x <sup>2</sup>	-8x

Bunny Hops

FOIL (First-Outer-Inner-Last)

$$(2x + 3)(5x + 2)$$

$$= 10x^2 + 4x + 15x + 6$$

$$= 10x^2 + 19x + 6$$

$$(3x - 5)(2x + 7)$$

$$= 6x^2 + 21x - 10x - 35$$

$$= 6x^2 + 11x - 35$$

Chart

$$(2x + 3)(5x + 2)$$

	5x	+2
2x	10x <sup>2</sup>	4x
3	15x	6

$$= 10x^2 + 19x + 6$$